

FORM PTO-1449  U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE				ATTY. DOCKET NO. COG-2-0974.02.US		SERIAL NO. 10/695,229	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT  (Use several sheets if necessary)				APPLICANT Sugar et al.			
				FILING DATE October 28, 2003		GROUP 2682	

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 MAY 31 2005  
 PATENT & TRADEMARK OFFICE

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL	*	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
RP	*	4,121,221	10/1978	Meadows			
		4,599,734	07/1986	Yamamoto			
		4,639,914	01/1987	Winters			
	**	5,274,844	12/1993	Harrison et al.			
		5,394,435	02/1995	Weerackody			
		5,437,055	07/1995	Wheatley, III			
	*	5,457,808	10/1995	Osawa et al.			
		5,491,723	02/1996	Diepstraten			
	*	5,493,307	02/1996	Tsujimoto			
		5,507,035	04/1996	Bantz et al.			
	*	5,539,832	07/1999	Weinstein et al.			
	*	5,570,366	10/1996	Baker et al.			
		5,577,265	11/1996	Wheatley, III			
		5,610,617	03/1997	Gans et al.			
	*	5,752,173	05/1998	Tsujimoto			
	*	5,761,193	06/1998	Derango et al.			
	*	5,761,237	06/1998	Petersen et al.			
	*	5,812,531	09/1998	Cheung et al.			
	*	5,848,105	12/1998	Gardner et al.			
	*	5,898,679	04/1999	Brederveld et al.			
	*	5,912,921	06/1999	Warren et al.			
	*	5,930,248	07/1999	Langlet et al.			
	**	5,982,327	11/1999	Vook et al.			
		6,008,760	12/1999	Shattil			
	*	6,023,625	02/2002	Myers Jr.			
	**	6,037,898	03/2000	Parish et al.			
		6,038,272	03/2000	Golden			
		6,044,120	03/2000	Bar-David et al.			

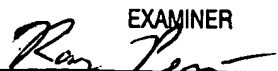
EXAMINER <i>Roy P. ...</i>	DATE CONSIDERED 9/15/05
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RP	6,058,105	05/2000	Hochwald et al.				
*	6,091,934	07/2000	Berman et al.				
	6,097,771	08/2000	Foschini				
*	6,118,788	09/2000	Kermani				
	6,122,260	09/2000	Liu et al.				
	6,124,824	09/2000	Xu et al.				
*	6,141,393	10/2000	Thomas et al.				
*	6,141,567	10/2000	Youssefmir et al.				
*	6,144,651	11/2000	Rinchiuso et al.				
	6,144,711	11/2000	Raleigh et al.				
	6,147,985	11/2000	Bar-David et al.				
	6,157,340	12/2000	Xu et al.				
*	6,157,843	12/2000	Derango et al.				
**	6,177,906	01/2001	Petrus				
*	6,185,440	02/2001	Barratt et al.				
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	6,252,548	06/2001	Jeon				
*	6,252,884	06/2001	Hunter				
*	6,266,528	07/2001	Farzaneh				
*	6,295,026	09/2001	Chen et al.				
	6,298,092	10/2001	Heath, Jr.				
	6,307,882	10/2001	Marzetta				
	6,317,466	11/2001	Foschini et al.				
	6,327,310	12/2001	Hochwald et al.				

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RP		6,331,837	12/2001	Shattil			
		6,349,219	02/2002	Hochwald et al.			
		6,351,499	02/2002	Paulraj et al.			
		6,362,781	03/2002	Thomas et al.			
	**	6,369,758	04/2002	Zhang			
		6,370,182	04/2002	Bierly et al.			
		6,377,631	04/2002	Raleigh			
		6,377,636	04/2002	Paulraj et al.			
		6,377,819	04/2002	Gesbert et al.			
		6,400,699	06/2002	Airy et al.			
		6,400,780	06/2002	Rashid-Farrokhi et al.			
		6,442,214	08/2002	Boleskei et al.			
	*	6,462,709	10/2002	Choi			
	*	6,463,295	10/2002	Yun			
		6,473,467	10/2002	Wallace et al.			
	*	6,522,898	02/2003	Kohno et al.			
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	*	6,646,600	11/2003	Vail et al.			
	*	6,684,064	01/2004	Kazakevich et al.			
		6,687,492	02/2004	Sugar et al.			
		2001/0012764	08/2001	Edwards et al.			
		2001/0015994	08/2001	Nam			
		2001/0046255	11/2001	Shattil			

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RP		2001/0053143	12/2001	Li et al.						
		2002/0001316	01/2002	Hornsby et al.						
		2002/0024975	02/2002	Hendler						
		2002/0034191	03/2002	Shattil						
		2002/0039884	04/2002	Raynes et al.						
		2002/0064246	05/2002	Kelkar et al.						
		2002/0067309	06/2002	Baker et al.						
		2002/0072392	06/2002	Awatier et al.						
		2002/0085643	07/2002	Kitchener et al.						
		2002/0102950	08/2002	Gore et al.						
		2002/0111142	08/2002	Klimovitch						
		2002/0118781	08/2002	Thomas et al.						
		2002/0122383	09/2002	Wu et al.						
		2002/0122501	09/2002	Awatier et al.						
		2002/0127978	09/2002	Khatiri						
		2002/0136170	09/2002	Struhsaker						
		2002/0141355	10/2002	Struhsaker et al.						
		2002/0147032	10/2002	Yoon et al.						
		2002/0158801	10/2002	Crilly, Jr. et al.						
		2002/0159537	10/2002	Crilly, Jr.						
		2002/0172186	11/2002	Larsson						
		2002/0172269	11/2002	Xu						
	**	2002/0196842	12/2002	Onggosanusi et al.						
		2003/0002450	01/2003	Jalali et al.						
	*	2003/0022693	01/2003	Gerogiokas et al.						
	**	2003/0032423	02/2003	Boros et al.						
	*	2003/0048761	03/2003	Jarett						

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U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
KP	**	2003/0108117	06/2003	Ketchum et al.	1	1	
	*	2003/0114108	06/2003	Frecassetti et al.			
	**	2003/0125090	07/2003	Zeira			
	**	2003/0139194	07/2003	Onggosanusi et al.			
	*	2003/0181165	09/2003	Sugar et al.			
	*	2004/0072546	04/2004	Sugar et al.			

FOREIGN PATENT DOCUMENTS								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO
RP		02/03568	01/2002	WO	1	1		
RP		01/45300	06/2002	WO				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	
RP	Iserte et al., "Pre-and Post-Beamforming in MIMO Channels Applied to HIPERLAN/2 and OFDM", IST Summit 2001, IST Mobile Communications Summit, September 2001.
RY	Iserte et al., "Joint Beamforming Strategies in OFDM-MIMO Systems", ICASSP 2002, IEEE International Conference on Acoustics, Speech and Signal Processing, May 2002.
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RP	Jakes, "Microwave Mobile Communications", Copyright 1974, pp. 313-320 and pp. 489-498.

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EXAMINER <i>Rog. [Signature]</i>	DATE CONSIDERED 9/15/85
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
RP		Aziz et al., "Indoor Throughput and Range Improvements Using Standard Complaint AP Antenna Diversity in IEEE 802.11a and ETSI HIPERLAN/2", Vehicular Technology Conference, 2002, VTC 2001, October 7-11, 2001, IEEE VTS 54 <sup>th</sup> , Vol. 4, pp. 2294-2298.	
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		Golden et al., "Detection Algorithm and Initial Laboratory Results Using V-BLAST Space-Time Communication Architecture", Electronic Letters, January 7, 1999, Vol. 35, No. 1.	
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		Junqiang et al., "Spatial Multiuser Access with MIMO Smart Antennas for OFDM Systems", IEEE VTC 2001, September 2001, pp. 1553-1557.	

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Rf		Jungnickel et al., "A MIMO WLAN Based on Linear Channel Inversion", IEE Seminar-MIMO Communication Systems from Concept TO Implementation, December 2001, pp. 20/1-20/6.	
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		Brunner, et al., "Downlink Beamforming for WCDMA Based on Uplink Channel Parameters", Proc. EPMCC 1999, pp. 375-380, March 1999.	
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		Love et al., "Equal Gain Transmission in Multiple-Input Multiple-Output Wireless Systems", November 2002, Proceedings of IEEE Globecom, pp. 1124-1128.	

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RP		Lucent Technologies, "Lucent Technologies: Chips Poised to Bring 'BLAST' Multiple Input/Multiple Output Technology to Laptops, PDAs and Other Mobile Devices", October 16, 2002, lucent.com.	
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